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10/720,534	11/24/2003	Kavi Mahesh	ORCL.P0070C	4394

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STATTLER JOHANSEN & ADELI LLP
60 SOUTH MARKET
SUITE 480
SAN JOSE, CA 95113

EXAMINER	
STARKS, WILBERT L	
ART UNIT	**PAPER NUMBER**
2129	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,534	MAHESH, KAVI	
	Examiner	Art Unit	
	Wilbert L. Starks, Jr.	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 U.S.C. §101

1. 35 U.S.C. §101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims 16-34 is directed to non-statutory subject matter.

2. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

> ...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's "terminology information" references are just such abstract ideas.

3. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

> Today we hold that *the transformation of data, **representing discrete dollar amounts**, by a machine through a series of mathematical calculations into a final share price*, **constitutes a practical application** of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result" -- ***a final share price** momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.* (emphasis added) *State Street Bank* at 1601.

4. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se statutory*. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

5. The court was being very specific.

6. Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording

purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer – i.e., "post-processing activity".)

7. Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

8. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

> ...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating 'abstract ideas' or 'natural phenomena' ... As the Supreme Court has made clear, '[a]n idea of itself is not patentable, ... *taking several abstract ideas and manipulating them together adds nothing to the basic equation*. In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

9. Since the Federal Circuit held in *Warmerdam* that this is the "dispositive issue" when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is "useful, concrete, and tangible" in similar cases. Accordingly, the Examiner finds that Applicant manipulated a set of abstract "terminology information" to solve purely algorithmic problems in the abstract (i.e., what *kind* of "information" is used? Algebraic word problems? Boolean logic problems? Fuzzy logic algorithms? Probabilistic word problems? Philosophical ideas? Even vague expressions, about which even reasonable persons could differ as to their meaning? Combinations thereof?) Clearly, a claim for manipulation of "terminology information" is provably even more abstract (and thereby less limited in practical application) than pure "mathematical algorithms" which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

10. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

11. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

12. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

> Finally, **the decision in In re Warmerdam**, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) **is not to the contrary.** *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that **'taking several abstract ideas and manipulating them together adds nothing to the basic equation'**; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the **holding** of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

13. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the "useful, concrete, and tangible" nature of a set of claims under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.

14. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicant's phrase "terminology information" is simply an abstract construct that does not limit the claims to the transformation of real world data

(such as monetary data or heart rhythm data) by some disclosed process. Consequently, the necessary conclusion under *AT&T, State Street* and *Warmerdam,* is straightforward and clear. The claims take several abstract ideas (i.e., "terminology information" in the abstract) and manipulate them together adding nothing to the basic equation.

15. Examiner looked at the claims in the light most favorable to Applicant. Statutory matter was sought from every perspective:

A. From the Warmerdam/AT&T perspective, the claims merely process abstract "terminology information" without adding more to the basic abstract equation;

B. from the State Street/Alappat perspective, Applicant does not mention any practical application that causes a "useful, concrete, and tangible result" in the claims (other than the result of "extending the knowledge base" in the computer...i.e., no number comes out to have an effect on the real world) unlike State Street where discrete dollar values were transformed in a practical application that caused a "useful, concrete, and tangible result" (i.e., a final share price);

C. from the Diehr/Deener perspective, there is nothing that could be construed as a "substance" transformed by the invention, much less a number that represents a measurable thing in the real world;

D. from the Arrhythmia perspective, the claims don't even come close to meeting that standard where **heart rhythm data** was processed;

E. Applicant has not even limited the hardware components to anything other than a standard computer executing an abstract algorithm.

The claims are absolutely devoid of statutory matter from any reasonable perspective known to patent law. Claims 16-34 are, thereby, rejected under 35 U.S.C. §101.

Claim Rejections - 35 USC §112

The following is a quotation of the first paragraph of 35 U.S.C. §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16-34 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the M.P.E.P.) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the M.P.E.P. puts it:

> ("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. 101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112."); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would**

> **anomalously be required to teach how to use a useless invention.**").See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 16-34 are rejected on this basis.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January

1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 16 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,654,731 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Claim 16

Claim 16's "receiving, into a computer, input terminology information comprising a plurality of input terms and information that specifies ontological relationships among at least two of said input terms;" is taught by Mahesh, claim 1, where it recites:

> receiving, into a computer, input terminology information comprising a plurality of input terms and information that specifies linguistic or semantic relationships among at least two of said input terms;

Claim 16's "storing, in said computer, a knowledge base comprising a plurality of ontologies, each one of said ontologies comprising a plurality of nodes hierarchically arranged to depict ontological relationships among said nodes, each node representing a term;" is taught by Mahesh, claim 1, where it recites:

> storing, in said computer, a knowledge base comprising a plurality of ontologies, each one of said ontologies comprising a plurality of nodes hierarchically arranged to depict linguistic and semantic relationships among said nodes, each node representing a term, wherein linguistic associations include associations between at least two terms where a term representing a

> child node is a type of a term representing a parent node, and semantic associations include associations between at least two nodes, although generally associated together, a node representing a child node is not a type of a concept representing a parent node;

Claim 16's "parsing said input terminology information to generate a logical structure that depicts ontological relationships among said input terms in a format compatible with said knowledge base;" is taught by Mahesh, claim 1, where it recites:

> parsing said input terminology information to generate a logical structure that depicts linguistic or semantic relationships among said input terms in a format compatible with said knowledge base;

Claim 16's "determining whether at least one input term exists as a node in said knowledge base;" is taught by Mahesh, claim 1, where it recites:

> determining whether at least one input term exists as a node in said knowledge base;

Claim 16's "generating a new and independent ontology for said knowledge base comprising said logical structure of said ontological relationships if none of said input terms exist as nodes in said knowledge base; and" is taught by Mahesh, claim 1, where it recites:

> generating a new and independent ontology for said knowledge base comprising said logical structure of said linguistic or semantic relationships if none of said input terms exist as nodes in said knowledge base; and

Claim 16's "extending said knowledge base by storing data that logically couples said logical structure of said ontological relationships to a node that matches an input term." is taught by Mahesh, claim 1, where it recites:

> extending said knowledge base by storing data that logically couples said logical structure of said linguistic or semantic relationships to a node that matches an input term.

Claim Rejections - 35 U.S.C. §102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 16, 17, and 26 rejected under 35 U.S.C. §102(e) as being anticipated by Wical (U.S. Patent Number 6,061,675 A; dated 09 MAY 2000; class 706; subclass 045).

Claim 16

Claim 16's "receiving, into a computer, **input terminology** information comprising a plurality of input terms and information that specifies ontological relationships among at least two of said input terms;" is anticipated by Wical, Abstract, where it recites:

> A knowledge catalog includes a plurality of independent and parallel static ontologies to accurately represent a broad coverage of concepts that define knowledge. The actual configuration, structure and orientation of a particular static ontology is dependent upon the subject matter or field of the ontology in that each ontology contains a different point of view. The static ontologies store all senses for each word and concept. A knowledge classification system, that includes the knowledge catalog, is also disclosed. A knowledge catalog processor accesses the knowledge catalog to classify input terminology based on the knowledge concepts in the knowledge catalog. Furthermore, the knowledge catalog processor processes the **input terminology** prior to attachment in the knowledge catalog. The knowledge catalog further includes a dynamic level that includes dynamic hierarchies. The dynamic level adds details for the knowledge catalog by including additional words and terminology, arranged in a hierarchy, to permit a detailed and in-depth coverage of specific concepts contained in a particular discourse. The static and dynamic ontologies are relational such that the linking of one or more ontologies, or portions thereof, result in a very detailed organization of knowledge concepts.

Claim 16's "**storing**, in said computer, a **knowledge base** comprising a plurality of **ontologies**, each one of said ontologies comprising a plurality of nodes hierarchically arranged to depict ontological relationships among said nodes, each node representing a term;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the **knowledge catalog** 100 to compare the content carrying words with the knowledge concepts stored in the static **ontologies**. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 16's "**parsing** said input terminology information to generate a logical structure that depicts ontological relationships among said input terms in a format compatible with said knowledge base;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor **parses** the knowledge catalog 100 to compare the content carrying words with the knowledge concepts stored in the static ontologies. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 16's "determining whether at least one input term **exists** as a node in said knowledge base;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the knowledge catalog 100 to compare the content carrying words with the knowledge concepts stored in the static ontologies. If the content carrying word is not **contained** in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 16's "**generating** a new and **independent ontology** for said knowledge base comprising said logical structure of said ontological relationships if none of said input terms exist as nodes in said knowledge base; and" is anticipated by Wical, Abstract, where it recites:

> A knowledge catalog includes a plurality of **independent** and parallel static **ontologies** to accurately represent a broad coverage of concepts that define knowledge. The actual configuration, structure and orientation of a particular static ontology is dependent upon the subject matter or field of the ontology in that each ontology contains a different point of view. The static ontologies store all senses for each word and concept. A knowledge classification system, that includes the knowledge catalog, is also disclosed. A knowledge catalog processor accesses the knowledge catalog to classify input terminology based on the knowledge concepts in the knowledge catalog. Furthermore, the knowledge catalog processor processes the input terminology prior to attachment in the knowledge catalog. The knowledge catalog further includes a dynamic level that includes dynamic hierarchies. The dynamic level adds details for the knowledge catalog by including additional words and terminology, arranged in a hierarchy, to permit a detailed and in-depth coverage of specific concepts contained in a particular discourse. The **static and dynamic ontologies** are relational such that the linking of one or more ontologies, or portions thereof, result in a very detailed organization of knowledge concepts.

Claim 16's "**extending** said knowledge base by storing data that logically couples said logical structure of said **ontological relationships to a node** that matches an input term." is anticipated by Wical col. 59, lin. 50-67, where it recites:

> At this point the content indexing processor **generates** a plurality of **head words**, wherein each head word carries content. For each head word, at least one contextual relationship is noted. In a preferred embodiment, the **context for each head word is listed hierarchically** such that a second contextual relationship to the head word is a more detailed relationship than the first contextual relationship for that head word. From these contextual relationships, the content indexing processor develops the dynamic set. Specifically, the dynamic hierarchies are generated based on head words and contextual

> relationships to the head word. After developing the dynamic hierarchies, the content indexing processor maps the dynamic hierarchies into the static ontologies forming the world view when complete for all documents. In this way, the dynamic classification system of the present invention classifies the theme concepts presented in the input discourse in the static ontologies 105 and dynamic level 135.

Claim 17

Claim 17's "receiving, into a computer, **input terminology** information comprising a plurality of input terms and relationship information about at least two of said input terms, said relationship information specifying ontological relationships among at least two of said input terms;" is anticipated by Wical, Abstract, where it recites:

> A knowledge catalog includes a plurality of independent and parallel static ontologies to accurately represent a broad coverage of concepts that define knowledge. The actual configuration, structure and orientation of a particular static ontology is dependent upon the subject matter or field of the ontology in that each ontology contains a different point of view. The static ontologies store all senses for each word and concept. A knowledge classification system, that includes the knowledge catalog, is also disclosed. A knowledge catalog processor accesses the knowledge catalog to classify input terminology based on the knowledge concepts in the knowledge catalog. Furthermore, the knowledge catalog processor processes the **input terminology** prior to attachment in the knowledge catalog. The knowledge catalog further includes a dynamic level that includes dynamic hierarchies. The dynamic level adds details for the knowledge catalog by including additional words and terminology, arranged in a hierarchy, to permit a detailed and in-depth coverage of specific concepts contained in a particular discourse. The static and dynamic ontologies are relational such that the linking of one or more ontologies, or portions thereof, result in a very detailed organization of knowledge concepts.

Claim 17's "**storing**, in said computer, a **knowledge base** comprising a plurality of **ontologies**, each one of said ontologies comprising a plurality of nodes, each node representing a term, and comprising associations among said nodes that depict

ontological relationships among respective terms;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the **knowledge catalog** 100 to compare the content carrying words with the knowledge concepts stored in the static **ontologies**. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 17's "**storing a mapping** of said relationship information in a format compatible with said ontological relationships depicted in said knowledge base;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the **knowledge catalog** 100 to compare the content carrying words with the knowledge concepts stored in the static **ontologies**. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 17's "generating a logical structure from said relationship information, said input terms and said mapping that depicts ontological relationships among said input terms; and" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor **parses** the knowledge catalog 100 to compare the content carrying words with the knowledge concepts stored in the static ontologies. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 17's "integrating said logical structure of said input terns into said knowledge base." is anticipated by Wical col. 59, lin. 50-67, where it recites:

> At this point the content indexing processor **generates** a plurality of **head words**, wherein each head word carries content. For each head word, at least one contextual relationship is noted. In a preferred embodiment, the **context for each head word is listed hierarchically** such that a second contextual relationship to the head word is a more detailed relationship than the first contextual relationship for that head word. From these contextual relationships, the content indexing processor develops the dynamic set. Specifically, the dynamic hierarchies are generated based on head words and contextual relationships to the head word. After developing the dynamic hierarchies, the content indexing processor maps the dynamic hierarchies into the static ontologies forming the world view when complete for all documents. In this way, the dynamic classification system of the present invention classifies the theme concepts presented in the input discourse in the static ontologies 105 and dynamic level 135.

Claim 26

Claim 26's "receiving, into a computer, input terminology information comprising a plurality of input terms and relationship information about at least two of said input terms, said relationship information specifying ontological relationships among at least two of said input terms;" is anticipated by Wical, Abstract, where it recites:

> A knowledge catalog includes a plurality of independent and parallel static ontologies to accurately represent a broad coverage of concepts that define knowledge. The actual configuration, structure and orientation of a particular static ontology is dependent upon the subject matter or field of the ontology in that each ontology contains a different point of view. The static ontologies store all senses for each word and concept. A knowledge classification system, that includes the knowledge catalog, is also disclosed. A knowledge catalog processor accesses the knowledge catalog to classify input terminology based on the knowledge concepts in the knowledge catalog. Furthermore, the knowledge catalog processor processes the **input terminology** prior to attachment in the knowledge catalog. The knowledge catalog further includes a dynamic level that includes dynamic hierarchies. The dynamic level adds details for the knowledge catalog by including additional words and terminology, arranged in a hierarchy, to permit a detailed and in-depth coverage of specific concepts contained in a particular discourse. The static and dynamic ontologies are relational such that the linking of one or more ontologies, or portions thereof, result in a very detailed organization of knowledge concepts.

Claim 26's "**storing**, in said computer, a **knowledge base** comprising a plurality of **ontologies**, each one of said ontologies comprising a plurality of nodes, each node representing a tern, and comprising associations among said nodes that depict ontological relationships among respective terms;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the **knowledge catalog** 100 to compare the content carrying words with

> the knowledge concepts stored in the static **ontologies**. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 26's "storing a mapping of said relationship information in a format compatible with said ontological relationships depicted in said knowledge base;" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor parses the **knowledge catalog** 100 to compare the content carrying words with the knowledge concepts stored in the static **ontologies**. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 26's "generating a logical structure from said relationship information, said input terms and said mapping that depicts ontological relationships among said input terms; and" is anticipated by Wical col. 53, lin. 40-57, where it recites:

> The knowledge catalog processor processes content carrying words for use by the theme vector processor. Specifically, the knowledge catalog processor generates the noun or nominal forms of the content carrying words in the input discourse. The knowledge catalog processor **parses**

> the knowledge catalog 100 to compare the content carrying words with the knowledge concepts stored in the static ontologies. If the content carrying word is not contained in at least one domain in the static ontologies, then the word is noted as being not yet understood. If the word is stored more than once in the static ontologies, then the word is classified as ambiguous. If the word is stored only once in the static ontologies, then the word is classified as non ambiguous. If a word is classified as non ambiguous, then the theme vector processor determines the concept of the word from the static ontologies. In a preferred embodiment, a minimum of 50% of the content carrying words must be recognized as non ambiguous.

Claim 26's "integrating said logical structure of said input terms into said knowledge base." is anticipated by Wical col. 59, lin. 50-67, where it recites:

> At this point the content indexing processor **generates** a plurality of **head words**, wherein each head word carries content. For each head word, at least one contextual relationship is noted. In a preferred embodiment, the **context for each head word is listed hierarchically** such that a second contextual relationship to the head word is a more detailed relationship than the first contextual relationship for that head word. From these contextual relationships, the content indexing processor develops the dynamic set. Specifically, the dynamic hierarchies are generated based on head words and contextual relationships to the head word. After developing the dynamic hierarchies, the content indexing processor maps the dynamic hierarchies into the static ontologies forming the world view when complete for all documents. In this way, the dynamic classification system of the present invention classifies the theme concepts presented in the input discourse in the static ontologies 105 and dynamic level 135.

Response to Arguments

Argument 1

A. The Claims Recite Statutory Subject Matter Under 35 U.S.C. §101.

In rejecting the claims for being directed to non-statutory subject matter, the Examiner argues that the claims are not limited to practical applications in the technological arts. The Examiner argues, in part, that the claims recite manipulation of abstract "terminological information" and do not produce a "useful, concrete and tangible" result to have a practical application.

1. The Claimed Invention Recites Statutory Subject Matter To Automatedly Integrate Terminological Information Into A Knowledge Base.

In the Final Office Action of 1/12/2005, the Examiner rejected all pending claims (16-34) for being directed to non-statutory subject matter. The Examiner relies on In re Warmerdam and AT&T Corp. v. Excel Communications, Inc. In discussing the In re Warmerdam opinion, the Federal Circuit, in AT&T Corp. v. Excel Communications, Inc., opinion, concluded:

Whether one agrees with the courts conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions and discoveries that may be patented under 101. AT&T Corp. v. Excel Communications, Inc. 50 USPQ2d 1147 (Fed. Cir. 1999).

It is a generally accepted principle that abstract ideas or the mere manipulation of abstract ideas are not patentable (In re Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759) and that the claimed invention must accomplish a practical application that is a "useful, concrete and tangible result," (State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02). **Applicant submits that the claims of the subject application, however, are not abstract ideas or the mere manipulation of abstract ideas and accomplish a "useful, concrete and tangible result."**

Claim 16 recites, "A computer implemented method for automating integration of terminological information into a knowledge base." The method includes:

receiving, into a computer, input terminology information comprising a plurality of input terms and information that specifies ontological relationships among at least two of said input terms; storing, in said computer, a knowledge base comprising a plurality of ontologies, each one of said ontologies comprising a plurality of nodes hierarchically arranged to depict ontological relationships among said nodes, each node representing a term; parsing said input terminology information to generate a logical structure that depicts ontological relationships among said input terms in a format compatible with said knowledge base; determining whether at least one input term exists as a node in said knowledge base; generating a new and independent ontology for said knowledge base comprising said logical structure of said ontological relationships if none of said input terms exist as nodes in said knowledge base; and extending said knowledge base by storing data that logically couples said logical structure of said ontological relationships to a node that matches an input term.

Claim 17 recites, "A computer implemented method for automating integration of terminological information into a knowledge base." The method includes:

> receiving, into a computer, input terminology information comprising a plurality of input terms and relationship information about at least two of said input terms, said relationship information specifying ontological relationships among at least two of said input terms; storing, in said computer, a knowledge base comprising a plurality of ontologies, each one of said ontologies comprising a plurality of nodes, each node representing a term, and comprising associations among said nodes that depict ontological relationships among respective terms; storing a mapping of said relationship information in a format compatible with said ontological relationships depicted in said knowledge base; generating a logical structure from said relationship information, said input terms and said mapping that depicts ontological relationships among said input terms; and integrating said logical structure of said input terms into said knowledge base.
>
> Independent claim 26 is a computer readable medium claim reciting limitations similar to computer implemented method claim 17.

Aside from reciting the rejection and the claims, the sum and substance of Applicant's argument is the following: "Applicant submits that the claims of the subject application, however, are not abstract ideas or the mere manipulation of abstract ideas and accomplish a 'useful, concrete and tangible result.'"

Clearly, this is a conclusory statement that does not carry the burden of proving what law is appropriate in this situation and how it should be applied. Applicant merely makes the general assertion that the claims are statutory. Consequently, Applicant's argument is unpersuasive. The rejections STAND.

Argument 2

> 2. The Claimed Invention Defines "Terminological Information" As Comprising A Plurality Of Input Terms And Information That Specifies Ontological Relationships Among At Least Two Input Terms.
>
> In response to Applicant's argument in the 10/14/2004 Response to Office Action, the Examiner asserts that the claim term, "terminological information", is a term of variable and vague meaning, and rejects Applicant's examples set forth in the Specification. (1/12/05 Final Office Action, page 10). In rejecting Applicant's arguments, the Examiner noted that the "claims are to be judged by their limitations." (1/12/05 Final Office Action, page 11).

> The claims in the Present Application set forth a definition for the claim term, "terminology information." Independent claims 16, 17 and 26 recite:
>
> input terminology information comprising a plurality of input terms and information that specifies ontological relationships among at least two of said input terms.
>
> The terms used in a claim are given their ordinary meaning unless it appears from the patent that the inventor used them differently. ZMI Corp. v. Cardiac Resuscitator Corp., 1844 F.2d 1576, 1578 (Fed. Cir. 1988). It is clear from the claim recitation that "terminology information" connotes terms or words and information that specifies relationships between the terms or words (e.g., ontological information). As such, claims 16,17 and 26 ascribe a clear and definite meaning to the "terminology information" claim term.
>
> When interpreting claims, resort should be made to the claims at issue, the specification, and the prosecution history of the patent. Id. The Specification provides clear support for a claim interpretation that input terminology connotes terms or words and information that specifies relationships between the terms or words. Table 3 shows example input terminological information formatted in the ISO-2788 format. (Specification, page 20, lines 21- 22). For the example of Table 3, the input terms are "Congress Party of India", "BJP" and "Bharatiya Janata Party." The information, which specifies relationships between terms, includes: a Broader Term ("BT") relationship between "Congress Party of India" and "politics"; a synonym (SW') relationship between "BJP" and "Bharatiya Janata Party"; a Broader Term (`BT") relationship between "Bharatiya Janata Party" and "politics", and a related term ("RT") relationship between "Bharatiya Janata Party" and "Hinduism." Applicant is not arguing that the example is part of the claimed invention. Instead, the example provides a context for interpreting the claim limitation. As such, Applicant respectfully contends that the claim limitation, input terminology, has a definite meaning in light of the claims recitation and specification.

Whether a word has a meaning is not the dispositive issue under §101. The problem with the words "terminological information" lies in the fact that it is an abstract concept. Applicant is reminded that under M.P.E.P. §2111, Applicant's claims must be given their broadest reasonable interpretation.[1]

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[1] 2111 Claim Interpretation; Broadest Reasonable Interpretation
CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE INTERPRETATION
During patent examination, the pending claims must be "given their broadest

Applicant defines "terminology information" thusly:

> "input terminology information comprising a plurality of input terms and information that specifies ontological relationships among at least two of said input terms."

The plain meaning of the term "ontological" is "world model". Therefore, the plain meaning of Applicant's definition is information that specifies "world model" relationships between terms. Examples of such a thing include mathematical operators that take two terms such as an "addition symbol", a "subtraction symbol", etc. Further, it includes natural language constructs such as "verbs"...a construct that goes back as far as "The Code of Hamurabi." Further, it includes abstract linguistic concepts such as "nodes" for parse trees. Further it even includes computer programs per se that take multiple operators in order to model some "world."

Again, examiners are required to read the claims in their broadest reasonable interpretation. The broadest reasonable interpretation of these claims includes computer programs per se, pure mathematical constructs, and pure abstract linguistic constructs.

Applicant, by his own definition, has shown how abstract the constructs are. Applicant has no basis from which to say that terminological information is not abstract.

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reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969)

Note even further that "ontological" refers to an abstract "world model"...it need not even be a real world representation. In no way is Applicant's disclosure limited to anything in the real world. Consequently, Applicant's argument is quite unpersuasive and the rejections STAND.

Argument 3

3. Regardless of the Scope of the Term "Terminological Information," the Term Does Not Render the Present Claims Non-Statutory Subject Matter Per Se

The Examiner asserts that the term "terminological information" has a variable and vague meaning and include within its scope purely abstract information, such as philosophical information, mathematical information, etc. (page 5 and 11 of the Final Office Action). As such, the Examiner argues that the use of the term "terminological information" in these claims render the claims nonstatutory per se since the term is an abstract construct. Specifically, the Examiner stated:

Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore the claims are impermissibly abstract under 35 U.S.C. 101 doctrine. [Page 5, paragraph 10 of the Final Office Action.]

As established by case law and as stated in the M.P.E.P., however, the mere inclusion of a term that on its own may comprise non-statutory matter does not render the entire claim non-statutory. Rather, the claimed invention as a whole must accomplish a practical application to produce a "useful, concrete and tangible result," (State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02). As stated in MPEP 2106, claims define nonstatutory subject matter if they:

- consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or

- simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94,~ 30 USPQ2d at 145859) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.

[Emphasis added.]

MPEP 2106 further states that Examiners:

> have the burden to establish a prima facie case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101. Compare Musgrave, 431 F.2d at 893, 167 USPQ at 289; In re Foster, 438 F.2d 1011, 1013, 169 USPQ 99, 101(CCPA 1971). [Emphasis added.]
>
> The line of analysis used by the Examiner in rejecting the claims based on inclusion of the term "terminological information" is not consistent with the established case law or the MPEP. As stated above, the Examiner states that since the term "terminological information" can include within its scope abstract information (e.g., philosophical information, mathematical information, etc.), the claims that contain the term are non-statutory subject matter per se. Using this line of reasoning, a claim for a computer application that receives and processes "information" would be non-statutory subject matter per se since the "information" may include abstract information (e.g., Pi, radians, square root, etc.). Similarly, a claim for a telecommunications system that transmits and receives "information" would also be non-statutory subject matter per se since that "information" may include such abstract information. This type of reasoning is clearly not supported by the case law or the MPEP.
>
> In other words, simply because a claim contains a term that, recited on its own is nonstatutory, does not automatically render the entire claim non-statutory as well. Applicant agrees that the term "terminological information" recited on its own with no other further limitations is nonstatutory subject matter. However, the entirety of a claim must be analyzed to determine if it is nonstatutory subject matter rather than a single individual term used in the claim. For purposes of determining non-statutory subject matter under 101, Applicant submits that what scope of information (e.g., philosophical information, mathematical information, etc.) is included in the term "terminological information" is irrelevant in the present claims. Rather, in the present claims, it is the processing steps that are performed on the "terminological information" (whatever that information may or may not include) and whether these steps produce a "useful, concrete and tangible result" that is at issue.

Applicant's claims are devoid of statutory matter from any perspective.

Examiner looked at the claims in the light most favorable to Applicant. Statutory matter was sought from every perspective:

A. From the Warmerdam/AT&T perspective, the claims merely process abstract "terminology information" without adding more to the basic abstract equation;

B. from the State Street/Alappat perspective, Applicant does not mention any practical application that causes a "useful, concrete, and tangible result" in the claims (other than the result of "extending the knowledge base" in the computer...i.e., no number comes out to have an effect on the real world) unlike State Street where discrete dollar values were transformed in a practical application that caused a "useful, concrete, and tangible result" (i.e., a final share price);

C. from the Diehr/Deener perspective, there is nothing that could be construed as a "substance" transformed by the invention, much less a number that represents a measurable thing in the real world;

D. from the Arrhythmia perspective, the claims don't even come close to meeting that standard where **heart rhythm data** was processed;

E. Applicant has not even limited the hardware components to anything other than a standard computer executing an abstract algorithm.

The claims are absolutely devoid of statutory matter from any reasonable perspective known to patent law. Claims 16-34 are, thereby, rejected under 35 U.S.C. §101.

Argument 4

4. The Claimed Invention Provides A Useful, Concrete and Tangible Result By Automating The Integration of Information Into A Knowledge Base

The Examiner argues that the claims provide only a manipulation of an abstract construct (terminology information) and do not produce a "useful, concrete and tangible result" (page 5-7 of the Final Office Action). The Examiner provides no support for this conclusion, but simply states that terminological information may include abstract information and then makes the conclusory statement that, therefore, the claims recite mere manipulations of abstract information (paragraphs 11 and 14 of pages 6-7 of the Final Office Action). Using the Examiner's line of reasoning to the example given above, a claim for a telecommunications system that transmits and receives information is a mere manipulation of abstract information and non-statutory subject matter since the transmitted and received information may include abstract information. Again, this type of reasoning is clearly not supported by the case law or the MPEP.

Applicant submits that the computer automated reception, analysis, and integration of new terminological information into a knowledge base stored on a computer is, on its face, a "useful, concrete and tangible result," and thus more than a mere manipulation of the terminological information. In addition, the Specification describes a useful purpose that produces a tangible result from the claimed invention:

> The integration of user specified terminological information into a built-in knowledge base has application for use in specific domains. For example, an English language newspaper in India may buy a natural language processing system (e.g., Oracle ConText) to provide search capability for their on-line edition. However, the newspaper may find that the built-in knowledgebase has little or no knowledge of Indian politics and economics. For this hypothetical, the user desires to expand the built-in knowledge base to include terminological information on politics and economics. [Specification, page 20, lines 7 -14.)

The automated integration of new information into a knowledge base is, in itself, a "useful, concrete and tangible result" and the Specification describes a useful purpose that produces a tangible result from the claimed invention. As such, the Examiner has not met the prima facie burden of establishing that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas (as required by MPEP 2106). Applicant submits that the conclusory statement given by the Examiner (that since the tern "terminology information" may include abstract information, the claims therefore only recite mere manipulations of abstract information), without any support given for this conclusion, simply does not meet the prima facie burden placed on the Examiner.

According, taken as a whole, the claims of the present invention are of statutory subject matter.

What if the data in the database is full of nonfunctional data or what if the data represents nothing in the real world? The mere ordering of abstract data in a "knowledge base" is not the transformation of real world data...it is the mere ordering of abstract data.

Note that the court in State Street pointed to the transformation of "discrete dollar values" that created a "practical application" that caused a "useful, concrete, and tangible result." (i.e., a final share price.) Applicant has presented nothing to represent something in the real world so as to be transformed in the computer to produce a "practical application" that causes a "useful, concrete, and tangible result." Applicant merely makes the conclusory statement that it is so.

Unpersuasive.

The rejections STAND.

Argument 5

B. Rejection of the Claims Under 35 U.S.C. §112, First Paragraph is Improper

Claims 16-34 were rejected under 35 U.S.C. §112, First Paragraph, due to the rejection under 35 U.S.C. §101. As stated in the reasons given above, Applicant submits that the rejection under 35 USC § 101 is improper. Also, Applicant has provided sufficient disclosure to one of ordinary skill in the art to practice the invention without undue experimentation. The disclosure includes detailed flow charts, textual description, and examples of the claimed invention. As such, the specification and drawings provide an enabling disclosure for the claimed invention. Therefore, Applicant also submits that the rejection under 35 USC §112, First Paragraph, is improper.

Claims 16-34 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the M.P.E.P.) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the M.P.E.P. puts it:

> ("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. 101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application **also fails as a matter of law** to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112."); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**").See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 16-34 are rejected on this basis.

Argument 6

C. Rejection of Claim 16 For Statutory Type Double Patenting is Improper

Claim 16 was rejected for statutory type double patenting in view of claim 1 of US Patent 6,654,731. Claim 1 of US Patent 6,654,731 (referred to hereinafter as claim 1) recites, "A computer implemented method for automating integration of terminological information into a knowledgebase." The method includes:

receiving, into a computer, input terminology information comprising a plurality of input terms and information that specifies linguistic or semantic relationships among at least two of said input terms;

storing, in said computer, a knowledge base comprising a plurality of ontologies, each one of said ontologies comprising a plurality of nodes hierarchically arranged to depict linguistic and semantic relationships among said nodes, each node representing a term, wherein linguistic associations include associations between at least two terms where a term representing a child node is a type of a term representing a parent node, and semantic associations include associations between at

least two nodes, although generally associated together, a node representing a child node is not a type of a concept representing a parent node;

parsing said input terminology information to generate a logical structure that depicts linguistic or semantic relationships among said input terms in a format compatible with said knowledge base;

determining whether at least one input term exists as a node in said knowledge base;

generating a new and independent ontology for said knowledge base comprising said logical structure of said linguistic or semantic relationships if none of said input terms exist as nodes in said knowledge base; and

extending said knowledge base by storing data that logically couples said logical structure of said linguistic or semantic relationships to a node that matches an input term.

[Emphasis added.]

The underlined portions shown above in claim 1 highlight the differences between claim 1 and claim 16 of the subject application. As shown above, claim 1 relates to linguistic or semantic relationships among input terms, whereas claim 16 of the subject application relates to ontological relationships among input terms. Further, claim 1 includes the "child/parent node" limitation (shown underlined above) which claim 16 does not.

Applicant argument is mooted by the change of the rejection to an obviousness type rejection. On this basis, the rejection STANDS.

Argument 7

In response to Applicant's argument in the 10/14/2004 Response that claim 16 of the present application and claim 1 are not coextensive in scope, the Examiner argued that "linguistic relationships" and "semantic relationships" are both subsets of "ontological relationships." (Page 13 of the Final Office Action.) The Examiner then concluded that "the new term completely recaptures the previously patent material."

In essence, the Examiner is arguing that claim 16 of the present application is broader than claim 1 because the claim 16 term "ontological relationships" reads on the claim 1 terms "linguistic relationships" and "semantic relationships." Applicant contends that the issue for statutory type double patenting is not whether the claim at issue

reads on the disclosure of a prior issued claim, but whether the claim recites the same limitations. The fact that "linguistic relationships" and "semantic relationships" are both subsets of "ontological relationships" is irrelevant.

MPEP 804 states:

In determining whether a statutory basis for a-double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? 35 U.S.C. 101 prevents two patents from issuing on the same invention. "Same invention" means identical subject matter. Miller v. Eagle Mfg. Co., 151 U.S. 186 (1984); In re Vogel, 422 F.2d 438,164 USPQ 619 (CCPA 1970)...

A reliable test for double patenting under 35 U.S.C. 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. In re Vogel, 422 F.2d 438,164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist.

[Emphasis added.]

Claim 16 differ and is broader in scope than claim 1 because 1) the "ontological relationships" of claim 16 are broader in scope than the "linguistic and semantic relationships" of claim 1 (as the Examiner agreed in the Final Office Action), and 2) claim 1 contains the additional "child/parent node" limitation. As such, claims 1 and 16 are not identical subject matter. Further, the test for double patenting under 35 U.S.C. 101 (as specified in MPEP 804) is not met since claim 16 encompasses at least one embodiment that is not within the scope of claim 1 (since claim 16 is broader than claim 1, this is true by definition). For example, claim 16 **may** relate to "ontological relationships" that are not "linguistic and semantic relationships," and thus encompasses an embodiment that is not within the scope of claim 1.

For the above reasons, Applicant submits that claim 16 of the present application and claim 1 of US Patent 6,654,731 are not the same invention having identical subject matter, and therefore the rejection for statutory type double patenting should be removed.

Applicant argument is mooted by the change of the rejection to an obviousness type rejection. On this basis, the rejection STANDS.

One other note: Applicant says that claim 16 may relate to ontological relationships that are not linguistic and semantic relationships.

Saying that it may relate is not a limitation to the claim that avoids the anticipation.

Claims must be read according to their broadest reasonable interpretation. Now, according to Applicant's own argument, Applicant used the word "may" showing that the broadest reasonable interpretation is broader than what Applicant makes it appear and actually includes what Examiner said it did.

Applicant's argument is unpersuasive. The rejection STANDS.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. Specifically:

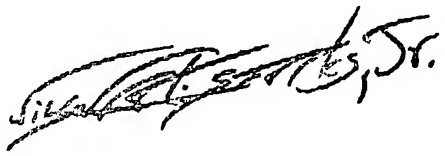
A. Wical (U.S. Patent Number 6,199,034 B1; dated 06 MAR 2001; class 704; subclass 009) discloses methods and apparati for determining theme for discourse.

B. Brash (U.S. Patent Number 5,960,384 A; dated 28 SEP 1999; class 704; subclass 009) discloses a method and device for parsing natural language sentences and other sequential symbolic expressions.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (571) 272-3691.

Alternatively, inquiries may be directed to the following:

S. P. E. David Vincent	**(571) 272-3080**
Official (FAX)	**(571) 273-8300**



Wilbert L. Starks, Jr.
Primary Examiner
Art Unit 2129

WLS

14 MAR 2007